

Remote sensing balloon comparisons

MkIV: Fourier Transform Infra-Red (FTIR) Spectrometer, JPL (*Geoff Toon*)

Species measured:

H₂O, CO₂, O₃, N₂O, CO, CH₄, NO, HF, HCl, ClO, OCS, H₂O₂, H₂CO, HOCl, HO₂, HO₂NO₂, CFC-113, N₂O₅, ClNO₃, HCN, CH₃Cl, CF₄, CCl₂F₂, CCl₃F, CCl₄, COF₂, C₂H₆, C₂H₂, N₂, CHClF₂, COCl₂, HCOOH, HDO, SF₆, CH₃CN

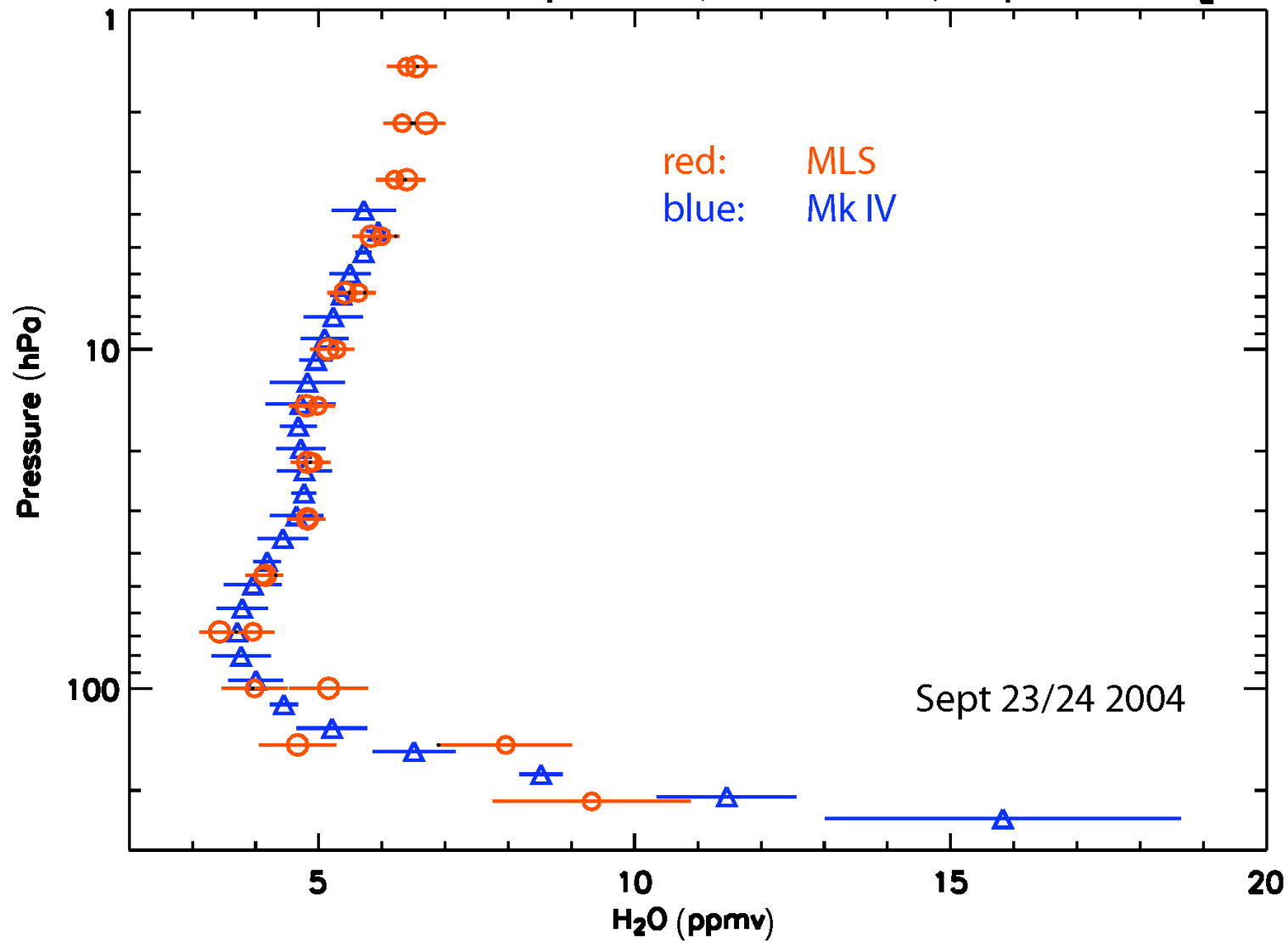
FIRS2: Fourier transform spectrometer operating in the far- (80-340 cm⁻¹) and mid-infrared (330-1220 cm⁻¹), Harvard-Smithsonian Center for Astrophysics (*Ken Jucks*)

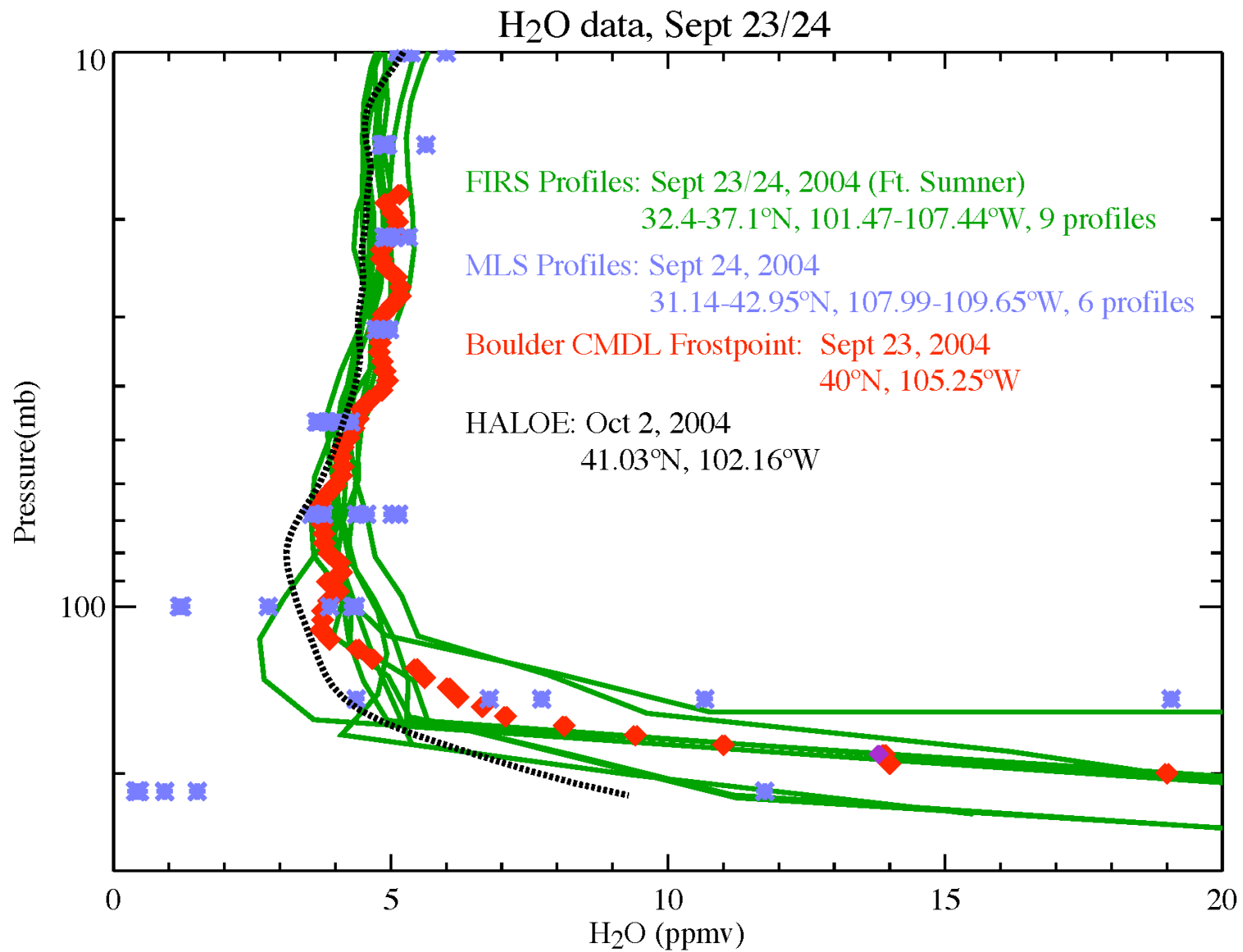
Species measured:

H₂O, O₃, N₂O, CH₄, NO₂, HNO₃, OH, HF, HCl, HOCl, H₂O₂, HO₂, ClNO₃, H₂¹⁷O, H₂¹⁸O, HDO, CFC-12, CFC-11, CCl₄

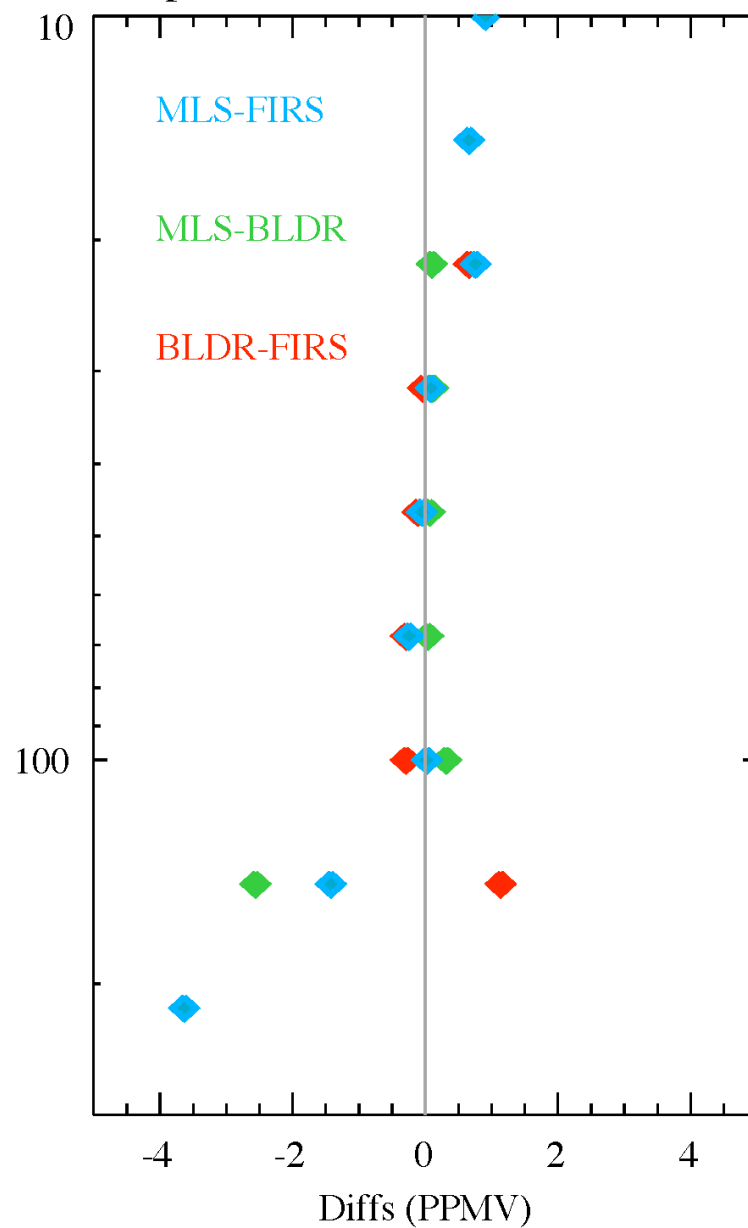
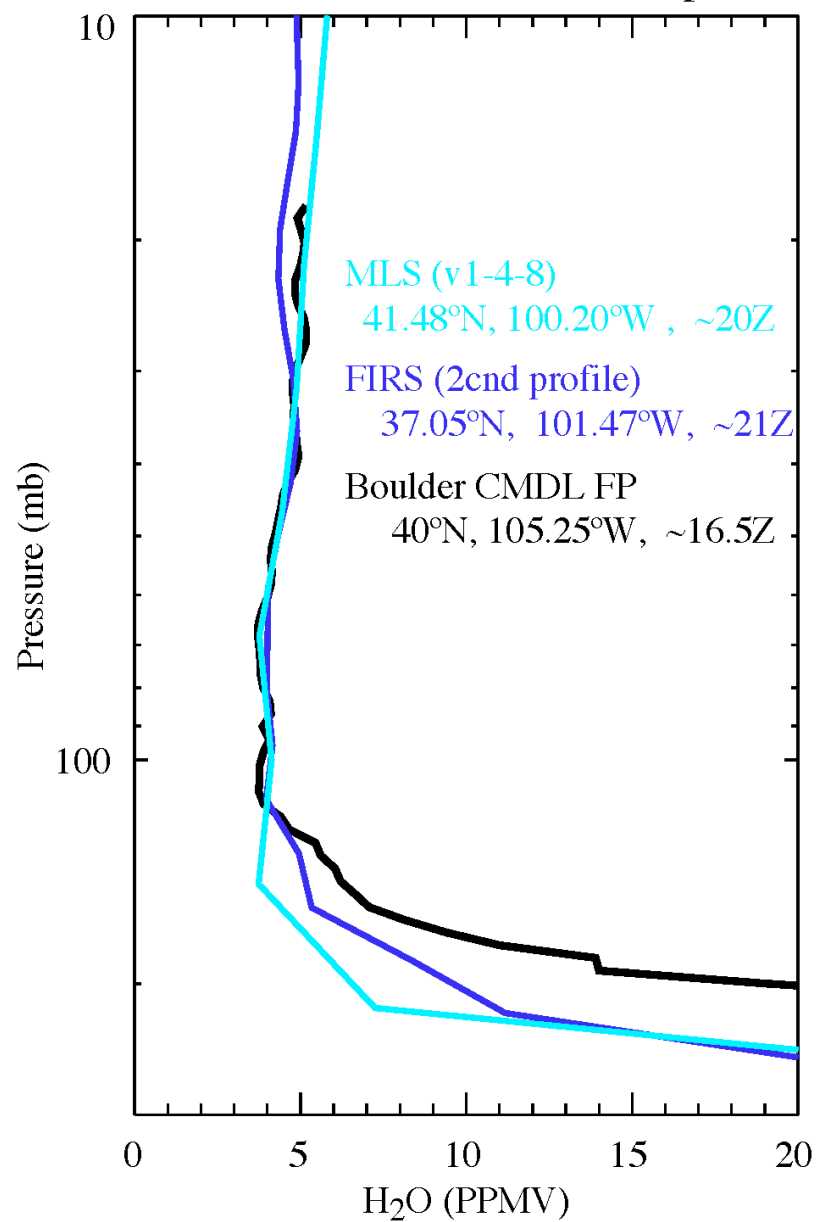
There was an Aura validation flight done on Sept 23/24 2004 from Ft. Sumner, NM including both balloon instruments. Both groups are currently at Ft. Sumner awaiting another flight opportunity.

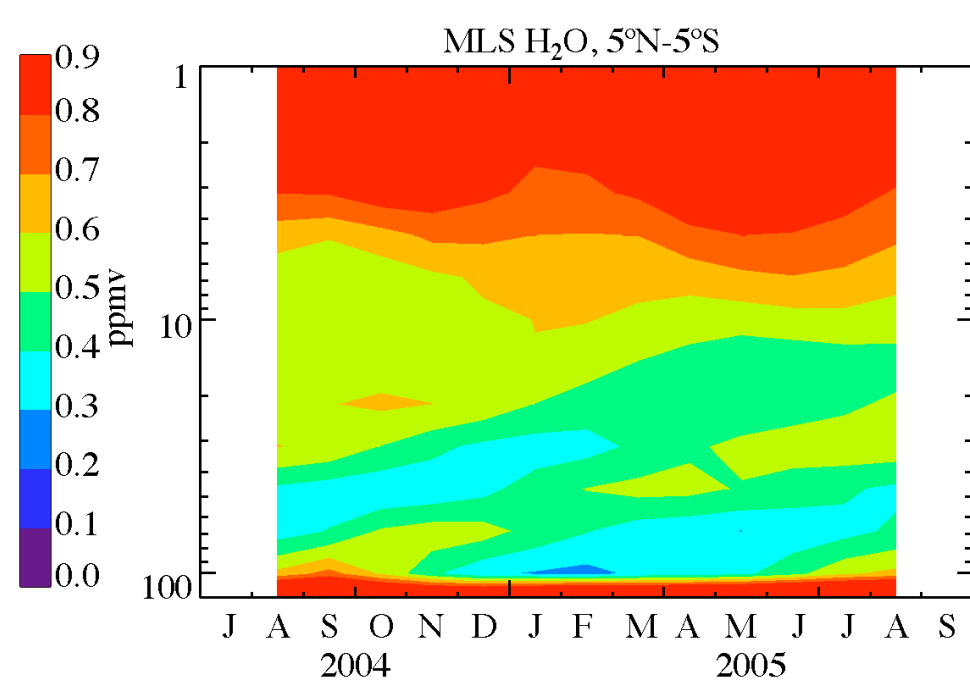
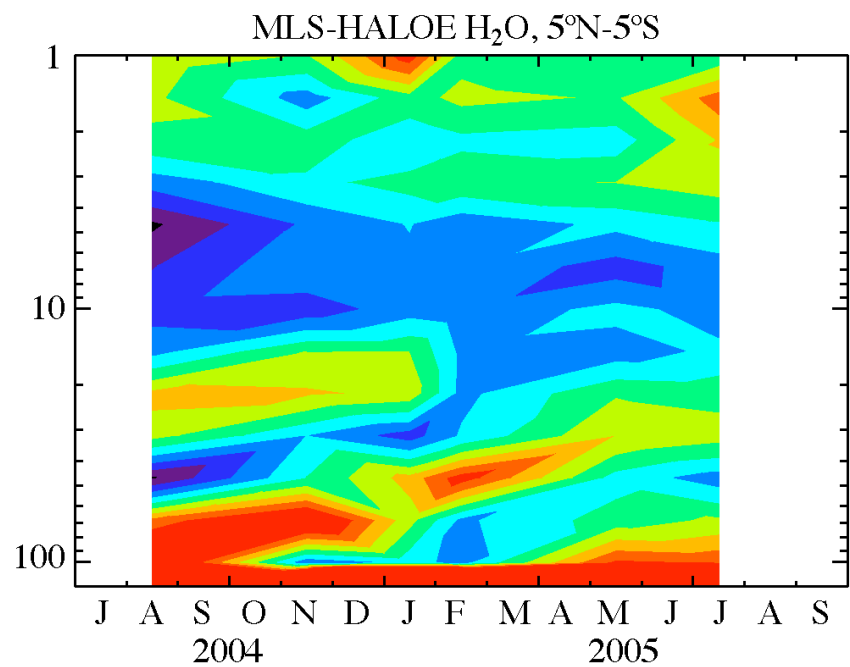
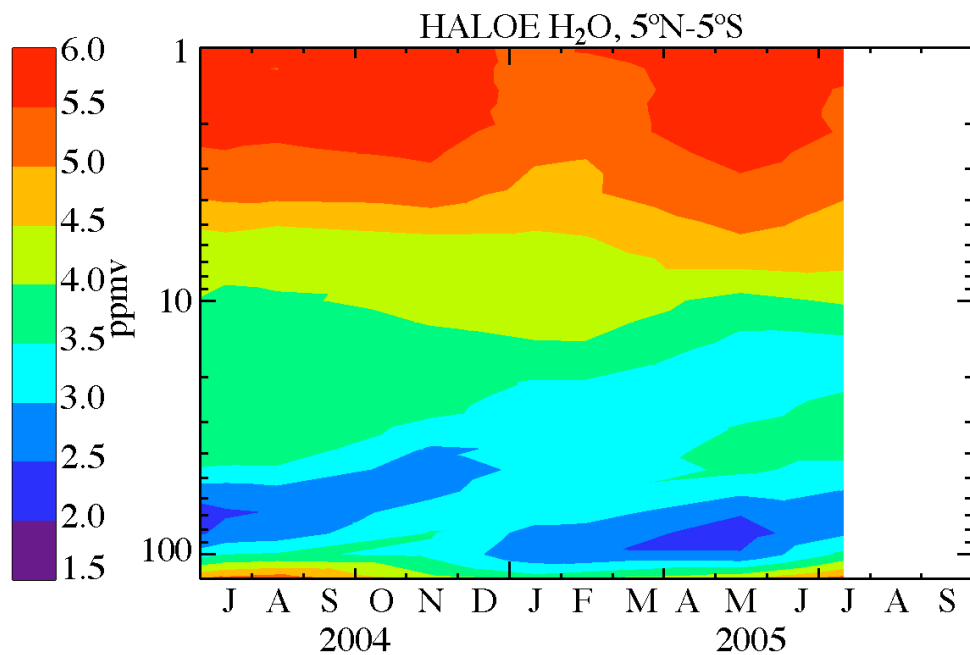
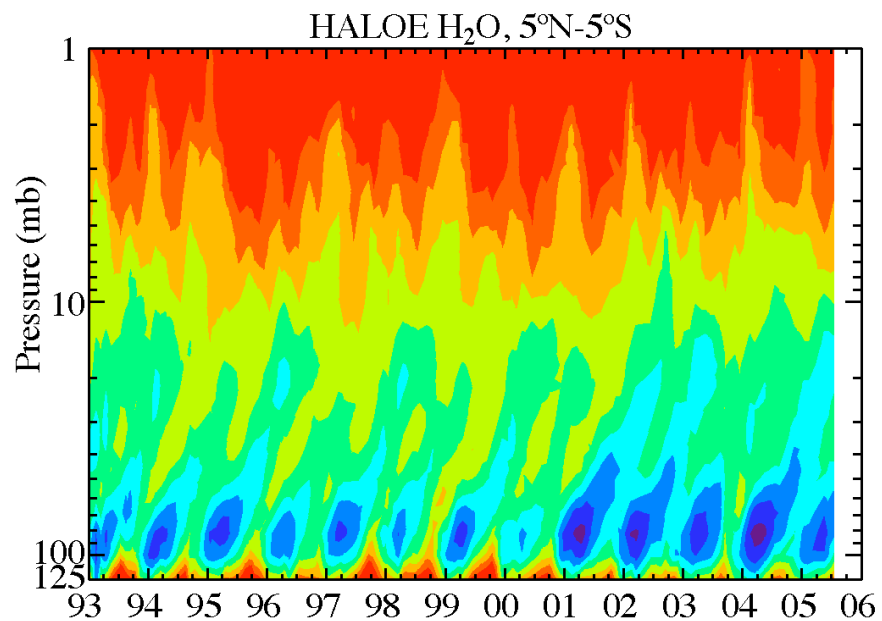
MLS and Balloon Comparisons, Ft. Sumner, Sep. 2004: H₂O

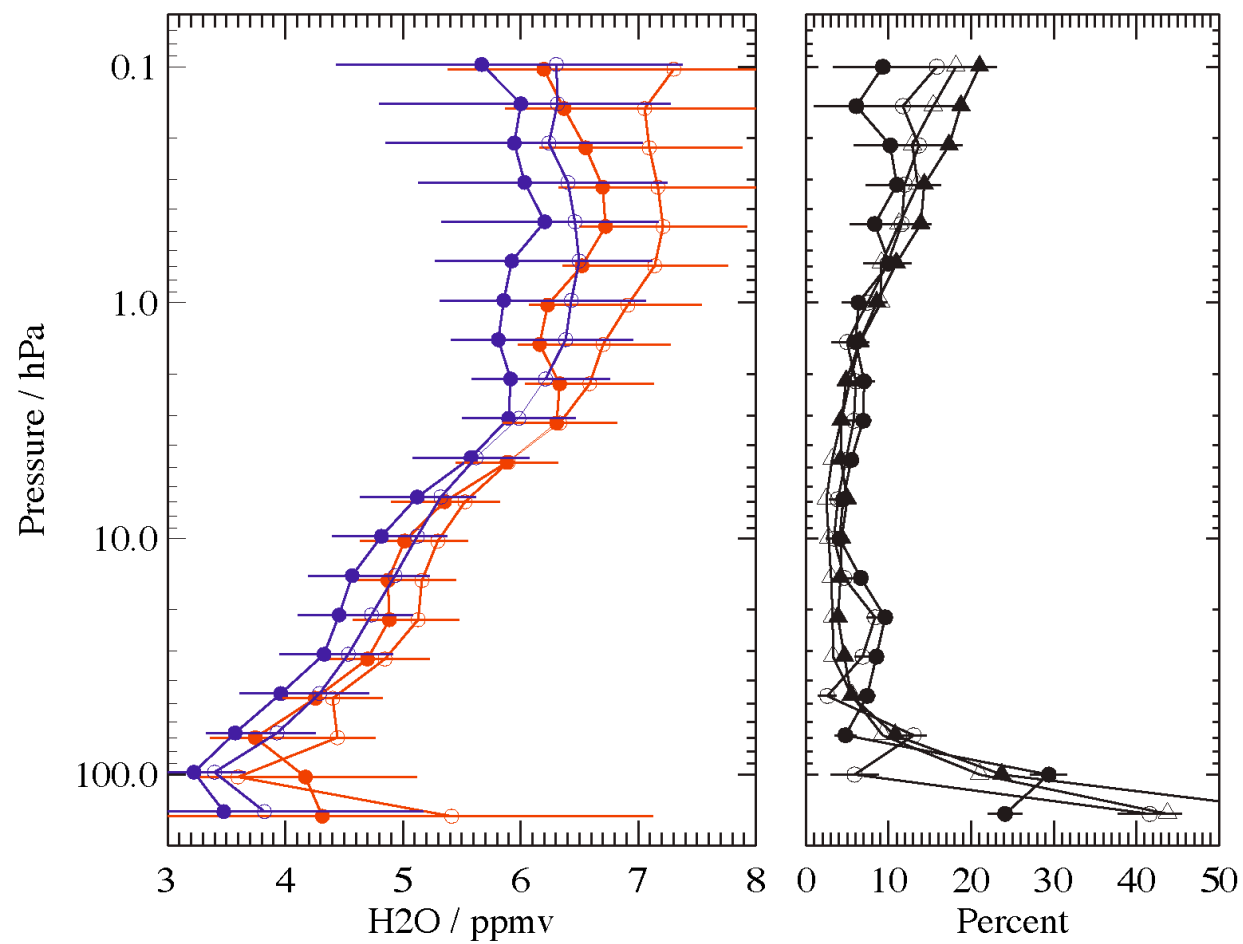




Water Vapor Comparison, Sept. 23, 2004







MLS: RED

HALOE: BLUE

From Froidevaux et al. early validation paper